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EXAMINER

ANDERSON, JOHN A

ART UNIT

PAPER NUMBER

3694

DATE MAILED: 12/07/2010

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/781,377	02/18/2004	Randall L. Duncan	IDF 2557 (4000-15600)	2796

TITLE OF INVENTION: STREAMING CONVERSION

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$0	\$0	\$1510	03/07/2011

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. **PROSECUTION ON THE MERITS IS CLOSED.** THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN **THREE MONTHS** FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. **THIS STATUTORY PERIOD CANNOT BE EXTENDED.** SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

## HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

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B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

**IMPORTANT REMINDER:** Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

# **PART B - FEE(S) TRANSMITTAL**

**Complete and send this form, together with applicable fee(s), to:** **Mail** **Mail Stop ISSUE FEE**  
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**INSTRUCTIONS:** This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

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I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/781,377 02/18/2004

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nonprovisional	NO	\$1510	\$0	\$0	\$1510	03/07/2011

EXAMINER	ART UNIT	CLASS-SUBCLASS
ANDERSON, JOHN A	3694	705-040000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.  
☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a **Customer Number is required.**

2. For printing on the patent front page, list

- (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, 1 \_\_\_\_\_  
(2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2 \_\_\_\_\_  
3 \_\_\_\_\_

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☐ Issue Fee  
☐ Publication Fee (No small entity discount permitted)  
☐ Advance Order - # of Copies \_\_\_\_\_

4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.  
☐ Payment by credit card. Form PTO-2038 is attached.  
☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number \_\_\_\_\_ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

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Date \_\_\_\_\_

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This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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## Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 998 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 998 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

**Notice of Allowability****Application No.**

10/781,377

**Applicant(s)**

DUNCAN ET AL.

**Examiner**

JOHN A. ANDERSON

**Art Unit**

3694

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☐ This communication is responsive to 08/25/2010.
2. ☒ The allowed claim(s) is/are 1-5 and 7-25.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some\* c) ☐ None of the:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.  
(a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached  
1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.  
(b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.  
**Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

/Ella Colbert/  
Primary Examiner, Art Unit 3694

**EXAMINER'S AMENDMENT**

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Michael Piper , Attorney for Appellants (Reg.No. 39,800) on November 01, 2010 with primary examiner Ella Colbert and John Anderson. The application has been amended as follows:

Please amend the claims as indicated below. The following is a complete listing of claims and replaces all prior versions and listings of claims in the present application:

**Listing of the Claims:**

1. (Previously Presented) A system for streaming conversion of data from a first system to a second system, comprising:  
an extractor component that extracts a unit of data from a data store associated with the first system;  
a translator component that converts the unit of data from a first data format compatible with the first system to a second data format compatible with the

second system;

a loader component that loads the unit of data converted to the second data format into a data store associated with the second system, and the extractor, the translator, and loader components convert the unit of data during normal operation of the first and second systems, wherein the normal operation comprises operating, by a component other than the extractor component, the translator component, and the loader component, on data from the first system other than the unit of data from the first system during the conversion of the unit of data from the first data\_format to the second data format, and wherein the extractor, translator, and loader components extract, convert, and load generally in parallel; and

a conversion database that maintains a schedule table comprising information indicating the time each of multiple units of data in the data store associated with the first system are to be converted; and

a master controller that instructs the extractor component to extract the unit of data from the data store associated with the first system based on the information in the schedule table.

2. (Original) The system of Claim 1, wherein the extractor component reads the unit of data from the first system to extract the data.

3. (Original) The system of Claim 1, wherein the unit of data is further defined as an account having a portion of data in a first file and a portion of data in a second file, both the first and second files associated with the first system.

4. (Original) The system of Claim 1, wherein the unit of data is identified in the first system as converted to the second system after the loader component loads the unit of data into the second system.

5. (Previously Presented) The system of Claim 1, further comprising a hierarchy component that translates a hierarchy associated with the unit of data from the first data format to the second data format.

6. (Canceled)

7. (Currently Amended) A method of streaming conversion of data from a first system to a second system, comprising:

extracting a unit of data from a database associated with the first system;

translating the unit of data from a first format accessible by the first system to a second format accessible by the second system;

loading the translated unit of data into a database associated with the second system; [[and]]

normally accessing data other than the unit of data from the first and second systems, wherein normally accessing comprises at least one other system accessing data other than the unit of data during the extraction, translation, and loading of the unit of data and, wherein the extracting, translating, and loading are performed generally in parallel; and instructing, by a master controller, to extract the unit of data from the database associated with the first system based on a schedule table that indicates a

time each of multiple units of data in the database associated with the first system are to be converted.

8. (Original) The method of Claim 7, further comprising:

extracting a second unit of data from the database associated with the first system while translating the unit of data; and

translating the second unit of data from the first format to the second format while loading the unit of data into the database associated with the second system.

9. (Original) The method of Claim 7, wherein the first and second systems are defined as billing systems.

10. (Original) The method of Claim 9, wherein the first system is further defined as a legacy billing system.

11. (Original) The method of Claim 7, further comprising locking the unit of data in the database associated with the first system to restrict access to the unit of data during the extracting, translating, and loading.

12. (Original) The method of Claim 11, further comprising updating an auditing component regarding a status of conversion of the unit of data.

13. (Original) The method of Claim 12, further comprising notifying a data warehouse that the unit of data has been converted to the second system.

14. (Original) The method of Claim 7, wherein the first system is further defined as a first billing system, the second system is further defined as a second billing system, and the unit of data is at least a portion of a customer account, and



wherein the method further comprises:

extracting unbilled usage related to the customer account from the first billing system;

updating, for other systems, the location of the customer account to the second billing system;

posting, by one of the other systems, unbilled usage related to the customer account to the first billing system after updating the location of the customer account to the second billing system; extracting the subsequently posted unbilled usage from the first billing system; comparing the unbilled usage from the second billing system to the unbilled usage extracted from the first billing system to identify new unbilled usage related to the customer account; and loading the new unbilled usage to the second billing system.

15. (Previously Presented) A system for streaming conversion of data, comprising: a first system having data in a first format; a second system having data in a second format; a data warehouse in communication with the first and second systems and that stores portions of data from the first and second systems; an auditing system that monitors changes to data in the first and second systems;

an enterprise system maintaining standards related to data in the first and second systems;

an extractor component that extracts a unit of data from the first system;

a translator component that converts the unit of data from the first format compatible with the first system to the second format compatible with the second system;

a loader component that loads the unit of data converted to the second format into the second system, and the extractor, the translator, and the loader components extract, convert, and load the unit of data during normal operation of the first and second systems, wherein the normal operation comprises operating on a second unit of the data from the first system during the conversion of the unit of data from the first system, wherein the extractor, translator, and loader components extract, translate, and load generally in parallel, and wherein the loader component instructs the first system to close the unit of data in the first format to prevent access to the unit of data in the first format after the unit of data converted to the second format has been successfully loaded;

an audit component that notifies the audit system regarding the conversion of the unit of data;

a master controller that blocks access to the unit of data during the conversion process; and

a warehouse component that notifies the data warehouse regarding the conversion of the unit of data to the second system.

16. (Previously Presented) The system of Claim 15, further comprising:  
a controller that parallelizes conversion of the unit of data by directing the extractor component, the translator component, and the loader component.
17. (Original) The system of Claim 16, wherein the audit component and the warehouse component are operably coupled to the controller.
18. (Previously Presented) The system of Claim 16, further comprising a hierarchy component in communication with the controller and that translates hierarchy information related to the single customer.
19. (Previously Presented) The system of Claim 16, wherein the controller promotes locking only a portion of data of the first system related to the unit of data such that the  
first system operates with the second portion of the data of the first system during the conversion of the unit of data to the second system.
20. (Original) The system of Claim 19, wherein the second portion of data of the first system is further defined as the data of the first system other than the unit of data.
21. (Original) The system of Claim 15, wherein the first and second systems are further defined as billing systems and wherein the unit of data is further defined as account information for a customer.
22. (Original) The system of Claim 15, wherein the unit of data is further defined as account information for a single customer.
23. (Original) The system of Claim 22, wherein the unit of data comprises billing

history for a single customer.

24. (Previously Presented) The system of Claim 15, further comprising:
- a plurality of extractor components, wherein each extractor unit of the plurality of extractor components extracts separate units of data from the first system and writes the extracted units of data to a file;
  - a plurality of translator components, wherein each translator component of the plurality of translator components reads one of the units of data from the file and converts the unit of data from the first format compatible with the first system to the second format compatible with the second system; and a queue used by the plurality of extractors and plurality of translators that coordinates the extraction and translation of the units of data.
25. (Original) The system of Claim 24, wherein the unit of data comprises billing history for a single customer.

#### **Allowable Subject Matter**

Claims 1-5, 7-25 are allowed.

The following is an examiner's statement of reasons for allowance:

The closest prior art Bowman-Amuah and Partovi disclose a method for translating an objective attribute converter in an information services patterns environment and streaming content over a telephone interface. Bowman-Amuah

and Partovi did not disclose extractor; translator and loader components extract, convert and load generally in parallel.

Mimno, P.R. discloses extracting/transforming/loading tool automatically generates the data extraction/transformation/loading program which typically runs in batch mode. Mimno did not disclose extractor; translator and loader components extract, convert and load generally in parallel.

For these reasons claims 1,7 and 15 are deemed allowable over the prior art of record and claims 4-5,8-14,16-25 are allowed by dependency.

It appears that the instant invention is beyond the skill of one of ordinary art. Accordingly the invention would not have been obvious because one of ordinary skill could not have been expected to achieve it. Nor would they have been able to predict the results and as such they would have not capability of expecting success.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### **Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOHN A. ANDERSON whose telephone number is (571)270-3327. The examiner can normally be reached on Monday through Friday 8:00 to 5:00 Pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ella Colbert can be reached on 571-272-6712. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/John A Anderson/  
Examiner, Art Unit 3694

John A Anderson  
Examiner  
Art Unit 3694

/J. A. A./

Examiner, Art Unit 3694

/Ella Colbert/

Primary Examiner, Art Unit 3694